WEBINAR

Data spaces: Experiences from strategic data spaces



15 September 2023

10.00 — 11.30 CET

Rules of the game



The webinar will be recorded



For questions, please use the ClickMeeting chat.



Please reserve 3 min after the webinar to help us improve by filling in our feedback form



Introduction



Inmaculada Farfan Velasco Project Manager, Data.europa.eu, Publications Office of the EU



Jerome De Barros
Policy Officer at DG SANTE
Health data space



Katerina Moutogianni
Policy Officer at DG
CNECT
Cultural Heritage data
space



Agenda

10.00 – 10.10	Opening and introduction of the series
10.10 – 10.35	Health data space – Jerome de Barros, Directorate-General for Health and Food Safety, European Commission
10.35 – 11.00	Cultural heritage data space – Katerina Moutogianni, Directorate General for Communications Networks, Content and Technology, European Commission
11.00 – 11.25	Questions and answers
11.25 – 11.30	Closing remarks



Unveiling the concept of data spaces



Secure and privacy-preserving IT infrastructure



Data governance mechanisms



Data holders in control



Presence of vasts amounts of data



Participation by an open number of organisations and individuals.





Common European data spaces







Health data space

Jerome de Barros,

Directorate-General for Health and Food Safety, European Commission



European Health Data Space

15-09-2023



General overview

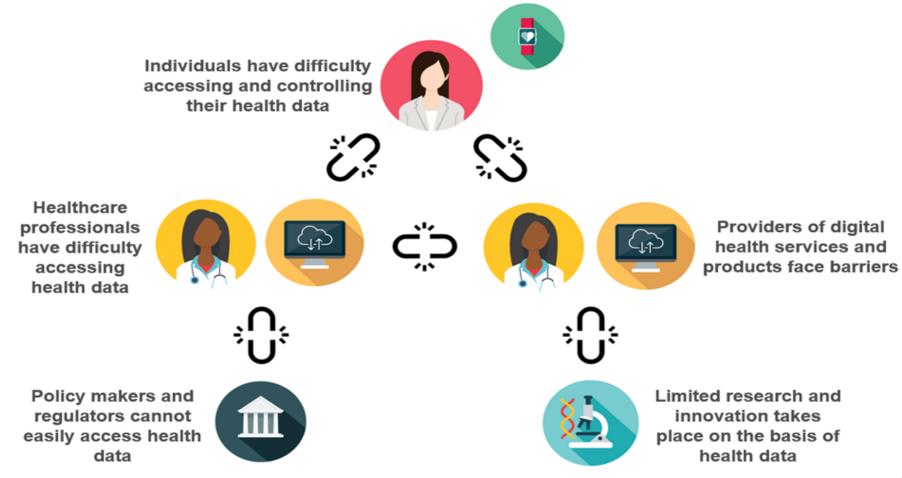


Why act now?

- The 2020 European Strategy for Data announced the Commission's plans for European data spaces, including EHDS
- The COVID-19 pandemic has clearly demonstrated the importance of digital services in the health domain, and has triggered an important acceleration in the uptake of digital tools. The European Digital Covid Certificate – positioned the EU as a global leader and standard setter in digital health
- The challenge now is **to maintain this momentum** on the importance of health data



Main challenges in harnessing the power of health data





Proposal for a Regulation on the European Health Data Space

It sets out rules, common standards, infrastructures and a governance framework for the use of electronic health data for healthcare, research, innovation and policy making

Empower
individuals to
access and control
their personal
health data





Unleash the data
economy by
fostering a genuine
single market for
digital health
services and
products (EHR
systems)



Ensure a
consistent
framework for the
use of individuals'
health data for
research,
innovation, policymaking and
regulatory
activities



EHDS – the first sector specific European Data Space



- Driven by stakeholders
- Rich pool of data of varying degree of openness
- Sectoral data governance (contracts, licenses, access rights, usage rights)
- · Technical tools for data pooling and sharing

Personal data spaces





Technical infrastructure for data spaces

Edge Infrastructure & Services Cloud Infrastructure & Services

High-Performance Computing

Al on demand platform

Al Testing and Experimentation Facilities



EHDS – links with other legal proposals and initiatives

GDPR

EHDS builds upon GDPR rights and further develops some of them

European Health Union

EHDS <u>will boost</u> the work of EU Cancer plan, HERA, Pharmaceutical Strategy for Europe

Data Governance Act, Data act

EHDS <u>complements</u> and provides more tailor-made rules for the health sector

EU cybersecurity framework (NIS directive)

EHDS <u>complements</u> and provides more tailor-made rules for the health sector

Artificial Intelligence Act

EHDS <u>supports and</u>
<u>complements training</u>
<u>of AI, interoperability of</u>
<u>AI and EHR systems</u>
and data quality

Medical Device Regulations

If manufacturers claim interoperability of devices with EHR systems –EHDS requirements apply



Legal basis and scope of health data

- Legal basis Article 16 TFEU and Article 114 TFEU
- Article 16- EHDS is <u>building upon GDPR</u>, strengthening the rights to the protection of personal health data and building on possibilities of EU law for processive sensitive health and genetic data
- Article 114 EHDS aims to improve the functioning of the internal market and the free movement of goods and services to avoid legislative fragmentation in the internal market and different rules and practices across the EU
- Full respect of Article 168 TFEU EHDS <u>does not intervene</u> in organisation and delivery of health services and medical care of Member States
- Non-personal and personal health data in scope



European Health Data Space (EHDS)

OBJECTIVES

Effective use of health data

SCOPE & EXPECTED IMPACT

Use of health data (primary, MyHealth@EU)

- Empower individuals to control their data
- Standardization and mandatory certification of EHR systems
- Voluntary labelling of wellness apps
- European Electronic Health Record Exchange Format (EEHRxF)

data, data protection, free movement of people, digital goods and services

Re-use of health data (secondary, HealthData@EU)

- Health data access bodies
- Purposes for use and forbidden use
- Data permits, secure environments, no identification

Facilitated Research & Innovation

Single market for health

Better Policy Making

MEANS

Legal / Governance

Quality of data

Infrastructure

Capacity building/digitalisation

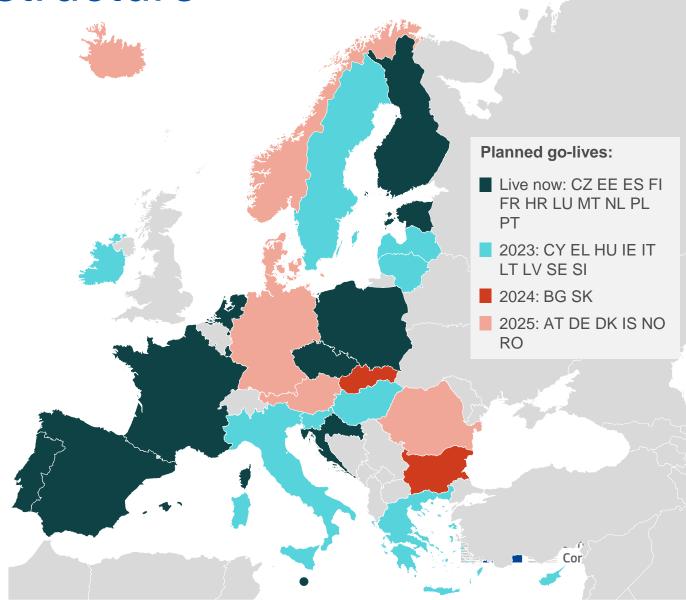


MyHealth@EU Primary use of health data (for provision of health services)



MyHealth@EU infrastructure

MyHealth@EU is the existing infrastructure that connects healthcare providers in 11 Member States. It allows them to exchange health data such as Patient Summaries and ePrescriptions. These services will be expanded to include lab results and other types of health data.



MyHealth@EU roadmap



HealthData@EU Secondary use of health data



Chapter IV Secondary use of health data

Defines a set of minimum categories of electronic data for secondary use that can be used for defined purposes (supporting policy making, regulatory activities, research, innovation and development of health products, training of Al algorithms eg for medical devices).

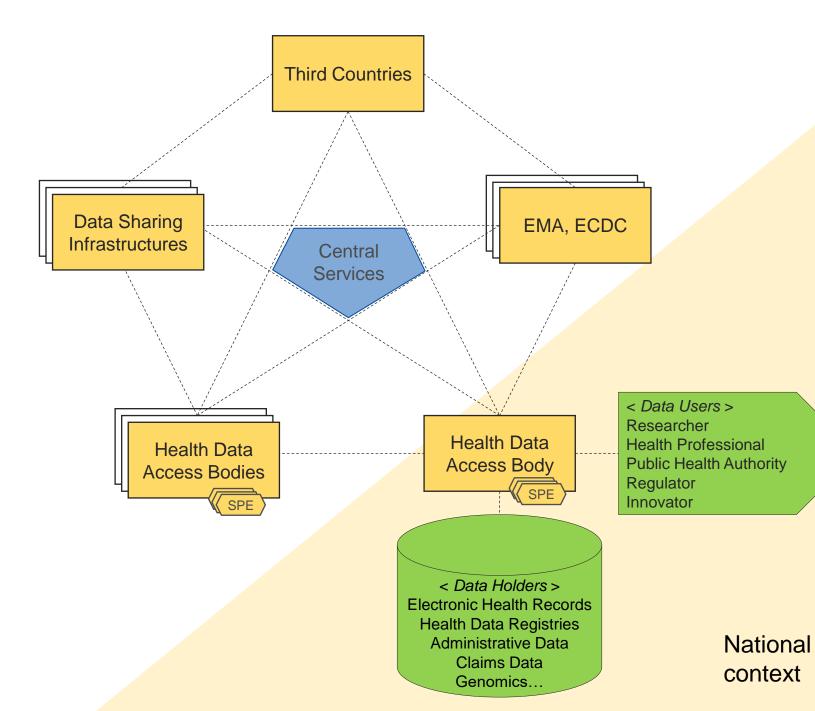
Defines **prohibited purposes** (eg use of data against persons, commercial advertising, increasing insurance, develop dangerous products) (Art. 33, 34, 35)

Set up a health data access body/bodies for secondary use of electronic health data (Art. 36) – building upon the Data Governance Act

The tasks and obligations of the health data access body, the data holders and the data users (Art. 37, 38, 39)

Sets the duties for data holders (Art. 41)

HealthData@EU reference architecture





Central support services provided by EC



National data management services provided by authorised participants

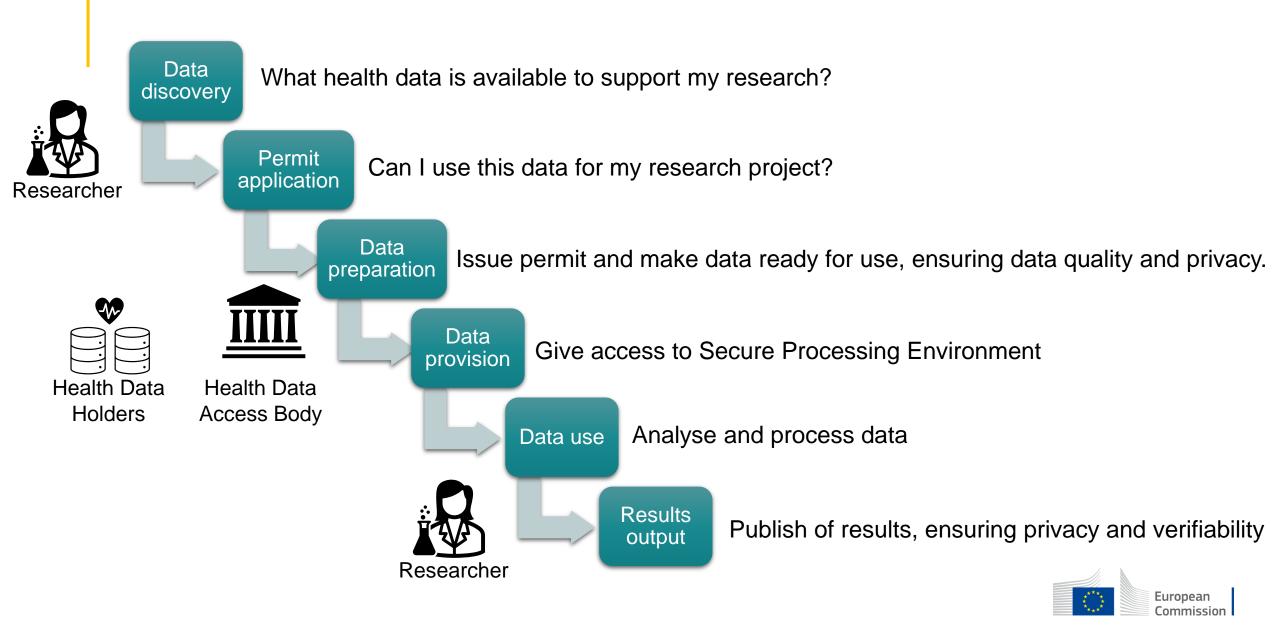


Secure Processing Environments



Local services provided by/to local partners

Overview of a generic data access approval process

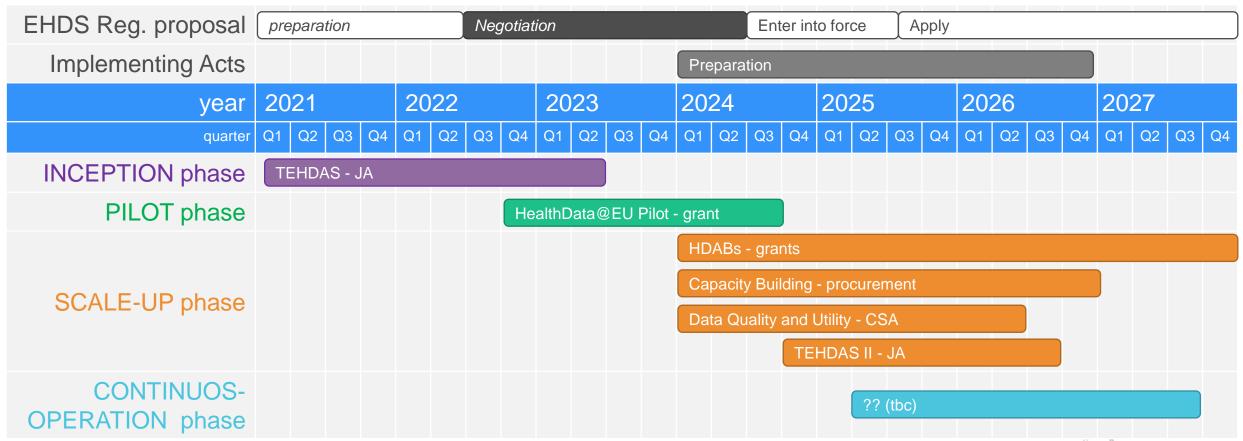


Implementation

Regulation, infrastructure and skills



Draft timeline for some actions on secondary use









The common European data space for cultural heritage

Webinar: Experiences from Strategic Data Spaces

15 September 2023

Katerina Moutogianni

DG CNECT, Unit 'Interactive Technologies, Digital for Culture and Education'



Commission Recommendation of 10 November 2021 on a common European data space for cultural heritage (2021/7953/EU)



Castell de Atzeneta, Castellón, España by ADD4D.org, Europe - CC BY-NC https://www.europeana.eu/en/item/181/share3d 831

Objectives:

- pave the way for a common European data space for cultural heritage
- help Member States accelerate digitisation and preservation efforts
- seize the opportunities of digital transformation for cultural heritage institutions

https://digital-strategy.ec.europa.eu/en/news/commission-proposes-common-european-data-spacecultural-heritage



Main elements

- Scope: tangible, intangible, natural, born digital
- Setting up comprehensive digital strategies for digitisation and preservation
- Taking up advanced technologies 3D, XR, AI, data
- Data space for cultural heritage and Europeana: more high quality data available for reuse, including 3D content, focus on interoperability, uptake of standards and frameworks
- Assessing the digital skills gap upskilling and reskilling professionals
- Promoting cross-sector & cross-border collaboration
- Involving more SMEs
- Use of funding possibilities at EU and national level



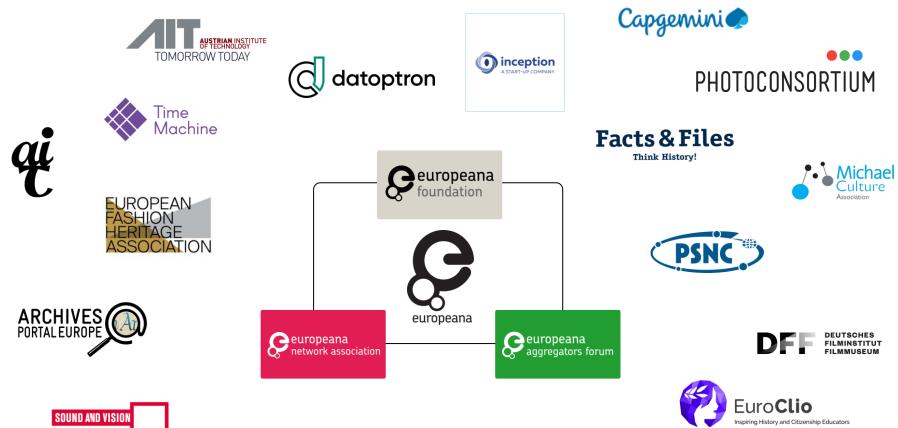


Builds on 15 years of work

- The common European data space for cultural heritage is funded under the Digital Europe Programme of the European Union.
- It builds on the work and experience of the Europeana Digital Service Infrastructure and the investment for the development of the Europeana digital platform since 2008.
- The common European data space for cultural heritage is one of the most advanced data spaces, starting from a solid base.
- The service contract to deploy the common European data space for cultural heritage started in Sep.2022 to Aug.2024, with a budget of €15M. Work led by the Europeana Foundation.



Consortium partners











Work areas

- 1 Data space infrastructure
- 2 High-quality data
- **3** Building capacity and fostering reuse
- Digital services for the public

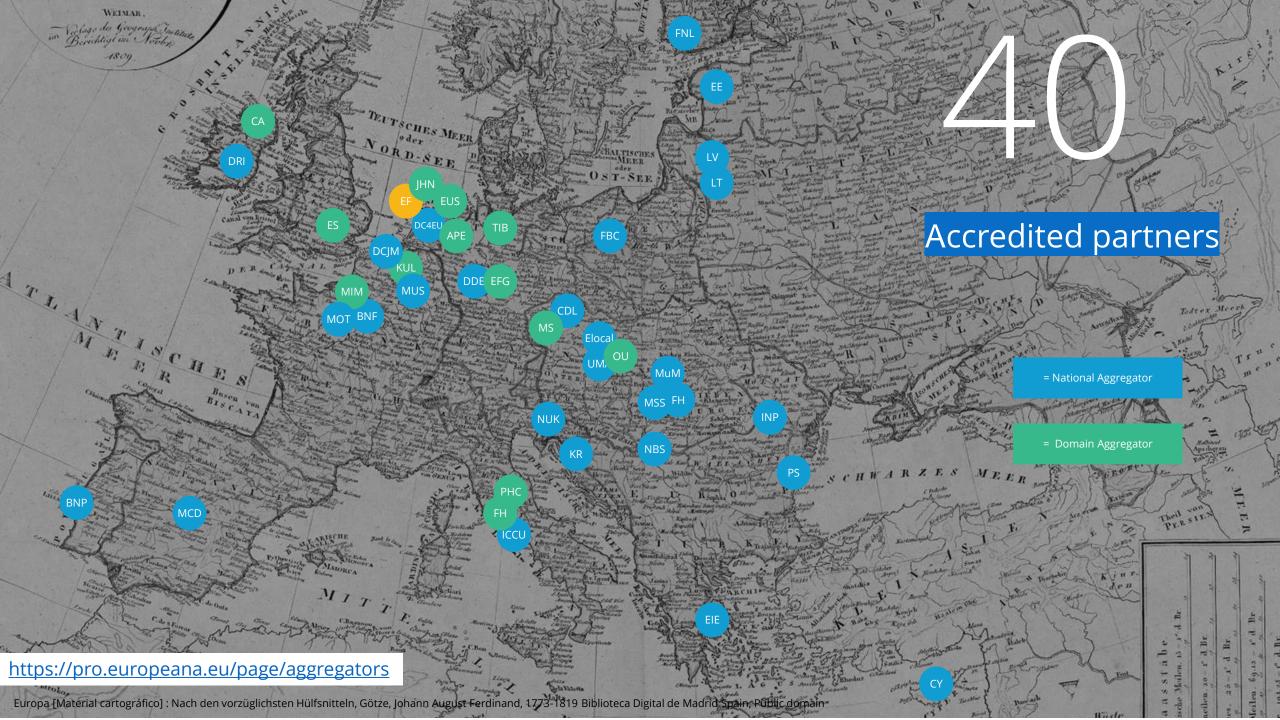




Data Space Infrastructure

- Evolving the aggregation infrastructure and services to support the growth of the underlying data repository
 - Metis Suite, for processing submitted datasets
 - Metis Sandbox, enabling aggregators to test datasets
 - Persistent identifiers, exploring possibilities for decentralised and linked data based approaches
- Collaboration with the Data Spaces Support Centre, to ensure interoperability and common approaches
- Expanding the Application Programming Interfaces (APIs), allowing internal and external services to search and access the data APIs | Europeana PRO





Data Governance & high quality data

- Developing a Data Governance Strategy, together with the stakeholder community
- Review and evolution of frameworks and standards (<u>Europeana Data Model</u>, <u>Publishing Framework</u>, and <u>Europeana Licencing Framework</u>)
 - Support for 3D content and metadata enrichments
- Raising data quality, resolving issues
- Data Statistics Dashboard feedback to data providers and stakeholders



Metadata

Metadata is created by cultural heritage institutions in a range of formats:

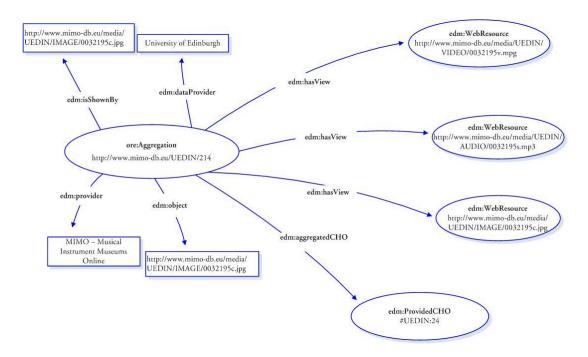
- Dublin Core
- Marc21
- LIDO
- EAD
- EFG data model
- ABCDE
- Darwin Core







For inclusion in Europeana, it is migrated to the **Europeana Data Model (EDM)**





Europeana Licensing Framework

- All digital objects have a rights statement, that indicates the extent to which they can be used
 - 14 standardised rights statements (https://pro.europeana.eu/page/available-rights-statements)
- All metadata is reusable, with no copyright limitations



Europeana Publishing Framework – data quality

2015 : Content Tiers

Europeana Publishing Framework: Content

Here you see how the different content tiers of the Publishing Framework work. In this example, we use images. For video, audio, text and 3D, please see the Europeana Publishing Guide.

TIER	DIRECT LINK TO OBJECT PROVIDED	RIGHTS STATEMENTS	EUROPEANA API DISPLAYS	BENEFITS (CUMULATIVE)
Europeana as a search engine. 'I want to search and browse collections online.'	Yes, Minimum of 0.1 megapixel in size	Any from the Europeana licensing Framework	Metadata plus direct link to object	Findability - indexed by search engines, linked data technology Web traffic - click-throughs to your site
Europeana as a showcase. 'I want to be guided through collections online.'	Yes. Minimum of 0.42 megapixel in size	Any from the Europeana licensing Framework	Metadata plus direct link to object	Use in thematic collections - providing context and relation to other collections on Europeana More marketing through Europeana
Europeana as a distribution platform for non-commercial reuse. 'I want to find, view and use collections in my own non-commercial projects.'	Yes. Minimum of 0.95 megapixel in size	Any from the Europeana licensing framework that allow for some re-use	Metadata plus direct link to object and can filter to show only re-usable objects	Impressions - collections viewed on platforms outside of Europeana Use in Europeana's existing partnerships and projects in e.g. education and research Use in apps and services by third parties
Europeana as a free reuse platform. 7 want to find, view and use collections in whatever way I choose.'	Yes. Minimum of 0.95 megapixel in size	Any from the Europeana licensing framework that allow free re-use	Metadata plus direct link to object and can filter to show only re-usable objects	Use on open platforms like Wikimedia Use by creative industry Use in commercial apps and services

europeana

EUROPEANA PUBLISHING FRAMEWORK: CONTENT

2019 : Metadata Tiers

Europeana Publishing Framework: Metadata

Here you see how the different metadata tiers of the Publishing Framework work.

TIER	LANGUAGE	ENABLING ELEMENTS*	CONTEXTUAL CLASSES** None At least one contextual class with all minimum required in the total contextual class with all minimum countries. OR LOD vocabulary	BENEFITS (CUMULATIVE) Findability - material is available on Europeana Collections, indexed by search engines, and linked data technology Web traffic - click-throughs to your site Greater potential for: Use in thematic collections - providing context and relation to other collections More marketing through Europeana			
Europeana as a basic search platform. 'I want to find a specific item tha I'm looking for.'	At least 25% of the provided EDM metadata fields that are relevant have at least 1 language qualified value	At least one enabling element taken from one of the 'Discovery scenario' groups					
Europeana as an exploration platform. 'I want to browse and explore Europeana even if I'm not sure what I'm looking for.'	At least 50% of the provided EDM metadata fields that are relevant have at least 1 language qualified value	At least three distinct elements taken from two of the 'Discovery scenario' groups					
Europeana as a knowledge platform. "want to search and browse in a more precise way, by named authors, specific subjects or topics	At least 75% of the provided EDM metadata fields that are relevant have at least 1 language qualified value	At least four distinct elements taken from two of the 'Discovery scenario' groups	At least two distinct contextual classes with all minimum required elements, OR links to LOD vocabularies	Greater potential for: Use in Europeana's existing partnerships and projects, in e.g. education and research Use in apps and services Use by creative industry			
*Discovery scenario	Enabling elements						
Browse by subjects and types Browse by agents	dcterms:created, dcterms:issued, dcterms dc:subject (with a concept - skos:Concept of dc:creator, dc:contributor, dc:publisher, do dc:subject (with a place - edm:Place class),	class), dc:format, dc:type, dcterms:medi c:subject (with an agent - edm:Agent cla	um	nt - edm:Agent class)			
**Contextual class	Minimum required metadata elements						
skos:Concept	edmbegin, edm:end skos:note (or skos:broader, skos:narrower, skos:exactMatch, skos:closeMatch, skos:related) skos:pre(label and skos:note (or skos:broader, skos:narrower, skos:exactMatch, skos:closeMatch, skos:related) skos:pre(label and rdsaCz:professionOrOccupation (or edm:begin, rdsaCz:dateOfBirth), edm:end, rdsaCz:dateOfDeath, rdsaCz:placeOfDeath, rdsaCz:placeOfBirth)						

edm:Place skos:preflabel, wgs84_pos:lat, wgs84_pos:long

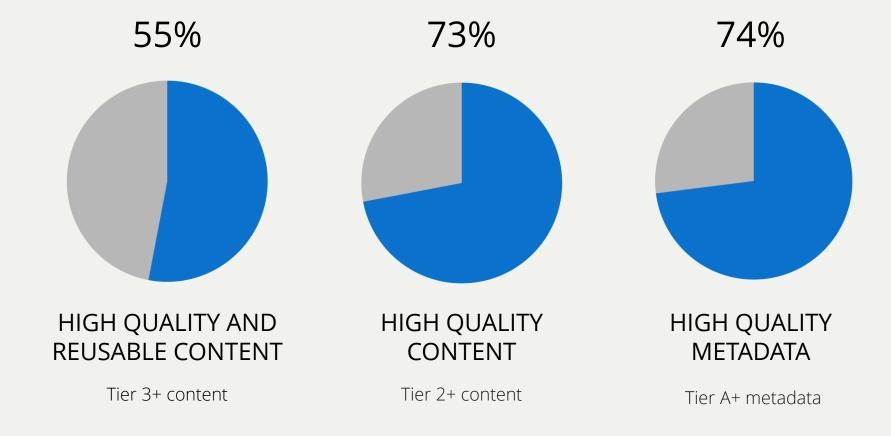
The contextual classes (listed above) can be included in the metadata at source, but the use of Linked Open Data vocabularies is preferred



EUROPEANA PUBLISHING FRAMEWORK: METADATA v0.8



HOW MUCH DATA IS CURRENTLY IN HIGH QUALITY TIERS?





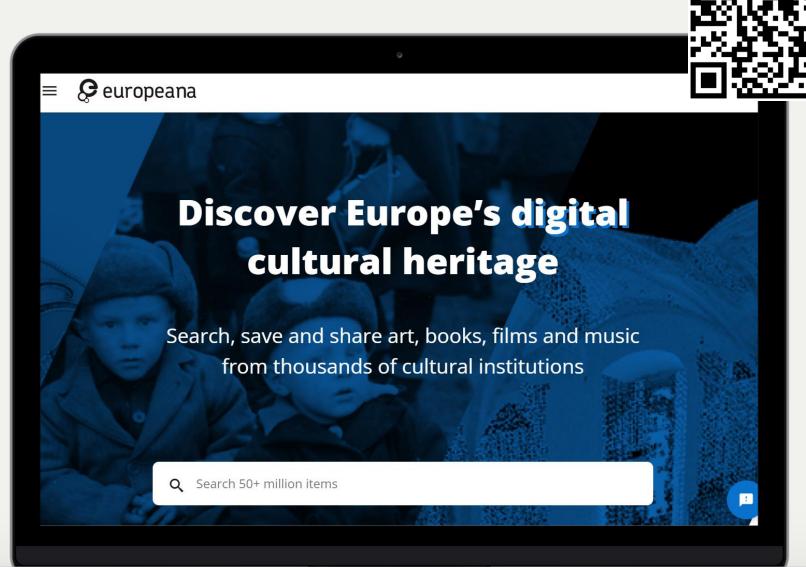
Digital services for the public

- Europeana.eu website
 - Multilingual data and editorial content, in all EU official languages
 - Advanced search and filtering functionality
 - Theme pages
 - User galleries
- User engagement via multiple channels
- GIF IT UP competition, Digital Storytelling Festival



EUROPEANA WEBSITE (europeana.eu)

- 50+ million records, 3600+ cultural institutions
- 50% of items can be freely reused, 72% allow some reuse
- 7200 user created galleries
- 6m visits per year

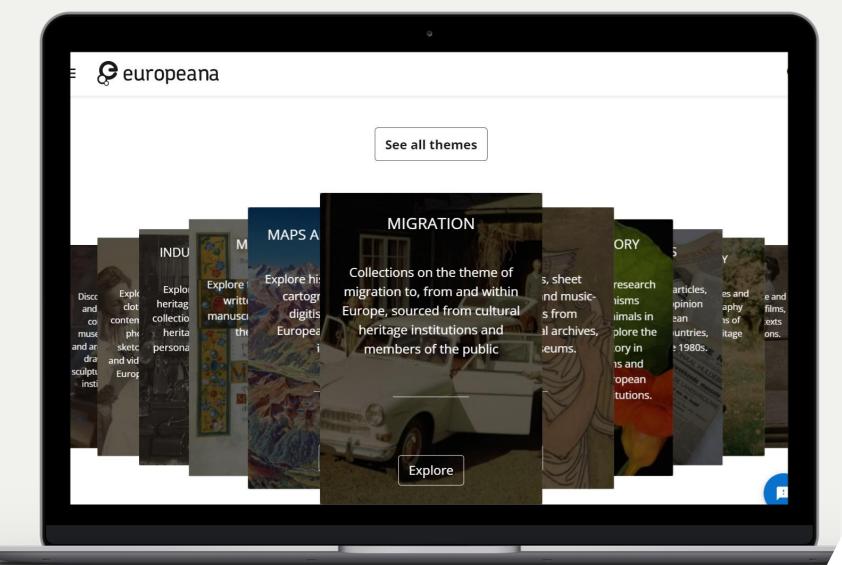




WHAT CAN YOU FIND?

30+ million images, 20+ million texts, 500,000 sound files, 300,000 videos ~5,000 3D objects.

Variety of themes: artworks, books, maps, manuscripts, newspapers, nature, sport, science and everything in between.





Capacity building & fostering reuse

- 4000+ network members
- Cultural heritage professionals: Program of training and events, Knowledge Base, peer to peer knowledge exchanges
- Education communities: Training and co-creating events for teachers, online course on creating e-Learning activities, <u>MOOC</u> on digital education with cultural heritage, Teaching with Europeana blog
- Research community: Research grants around reuse in academia and research, crowdsourcing projects
- Developers/API users: API documentation and training, hackathons, Low-Code Fest



EUROPEANA PRO (pro.europeana.eu)

Information, support and guidance for members of the community:

- Network and community activities
- Services and tools
- Projects and partnerships
- News and events

EXPLORE EUROPEANA



APIS

Europeana APIs can be used to build applications from the wealth of our collections, drawn from Institutions across Europe



Research



Education

Resources and information to help educators reuse cultural heritage data and collections in their classrooms and institutions.



Events

Europeana organises, attends and highlights a number of events throughout the year - explore some of interest.



Impact



Europeana reuse - be inspired





5D Culture

Aims to enrich the offer of 3D digital cultural heritage assets in the data space and foster their reuse in domains such as education, tourism and the wider cultural and creative sector

The project will start on 1 January 2023 and will run for 24 months.

Participant countries: Netherlands, Italy, Austria, Ireland, Italy and Spain



De-Bias

Aims to promote a more inclusive and up-to-date approach to describing cultural collections. DE-BIAS will create a tool that automatically detects offensive terms and provides information on their problematic background.

The project will start on 1 January 2023 and will run for 24 months.

Participant countries: Germany, Netherlands, Greece, Italy, Cyprus, Belgium and France





EUreka3D

Aims to build the capacity of small CHIs in digital transformation, particularly on issues related to 3D digitisation by offering knowledge, services and resources.

The project will start on 1 January 2023 and will run for 24 months.

Participant countries: Italy, Netherlands, Spain, Cyprus, France



Aims to development the 'Al4Culture platform' - an online capacity building hub for the application of Artificial intelligence technologies in the cultural heritage sector.

Al4Europeana

The project will start on 1 April 2023 and will run for 27 months.

Participant countries: Greece, Netherlands, Italy, Cyprus, Spain, Belgium.





Thank you!



https://digital-strategy.ec.europa.eu/en/policies/cultural-heritage



@digicultEU (Digital for Cultural Heritage)



CNECT-G2@ec.europa.eu



Questions & Answers





Please provide your feedback!





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Thank you

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